UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/637,442	08/11/2000	Shannon Lee Korson	13DV13511	7955

29399 7590 06/13/2006

JOHN S. BEULICK (12729)
C/O ARMSTRONG TEASDALE LLP
ONE METROPOLITAN SQUARE
SUITE 2600
ST. LOUIS, MO 63102-2740

EXAMINER	
PHAM, KHANH B	

ART UNIT	PAPER NUMBER
2166	

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/637,442	KORSON ET AL.	
	Examiner	Art Unit	
	Khanh B. Pham	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5 and 8-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5 and 8-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's submission filed on July 18, 2005 has been entered. Claims 1, 5 have been amended. Claims 1, 5, 8-19 are pending in this Office Action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1, 5, 8-19 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Jiang (US 6,278,913 B1), hereinafter "**Jiang**", and in view of Dahlberg (US 6,463,439 B1), hereinafter "Dahlberg".

As per claim 1, Jiang teaches a method of exporting data from an engine condition monitoring program database to a long term storage destination database (See Fig. 1), said method comprising:

- "downloading data recorded in a flight data recorder to a program database retaining only recent data in a ground-based computer system (i.e., "Ground Station", Fig. 1, layer 4) having an engine condition monitoring program" at Col. 4 lines 54-67 and Col. 5 lines 55-67;

- "wherein the engine condition program generates smoothed output data, and using said program database for storage and analysis" at Col. 4 lines 54-67 and Col. 5 lines 55-67;
- "extracting data from said program database, wherein said data comprises engine configuration data, aircraft configuration data, engine input data, engine raw output data, engine smoothed output data, aircraft input data, aircraft raw output data, aircraft smoothed output data, alert data, initialization data and compressed data" at Col. 4 lines 54-67 and Figs. 12a-12b;
- "wherein said extracted data includes re-alerted and backdated data" at Figs 8(b) to 8(d)
- "exporting said extracted data to said long term storage destination database (i.e., "Flight Management Center Database", Fig. 1, layer 5)" at Col. 6 lines 1-13;

Jiang does not teach the step of: "after a successful export, updating an external time file with the date and time of said successful export". However, Dahlberg teaches a method for incremental extracting data from a database (Col. 5 lines 47-55) utilizing time stamps to indicate the time of the last full extract at Col. 6 lines 55-60. As noted by Dahlbert, the time stamps help "reduce the time spent extracting data from the database. Instead of extracting the whole table, only information that has changed since the last full extraction is extracted" at Col. 5 lines 47-52. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Dahlberg and Jiang's teachings by adding the time stamps after a successful export as suggested by Dahlberg to Jiang's method in order to reduce the time and

resource required for the next data extraction, because only changed and added data identified using the time stamps are exported.

As per claim 5, Jiang teaches in a computer system having an engine condition monitoring program (Fig. 1, layer 1) , a program database (Fig. 1, layer 4) comprising a number of data tables and a long term storage destination database (Fig. 1, layer 5), a method of exporting data from said program database to said destination database comprising:

- "downloading data recorded in a flight data recorder to said program database for short term storage and analysis" at Col. 5 lines 53-67;
- "generating smoothed output data from the engine condition monitoring program" at Col. 4 lines 54-67 and Fig. 1;
- "retrieving data found in searching said program database, wherein said data comprises engine configuration data, aircraft configuration data, engine input data, engine raw output data, engine smoothed output data, aircraft input data, aircraft raw output data, aircraft smoothed output data, alert data, initialization data and compressed data" at Col. 4 lines 54-67 and Figs. 12a-12b;
- "wherein said extracted data includes re-alerted and backdated data" at Figs 8(c) and 8(d)
- "exporting said retrieved data to said long term storage destination database" at Col. 6 lines 1-13;

Jiang does not teach the steps of: "reading an external time file to determine the last date and time that data was successfully exported to said destination database; after a successful export, searching said program database for data that is new or changed since said last successful export; updating an external time file with the date and time of said successful export". However, Dahlberg teaches a method for incremental extracting data from a database (Col. 5 lines 47-55) utilizing time stamps to indicate the time of the last full extract at Col. 6 lines 55-60. As noted by Dahlbert, the time stamps help "reduce the time spent extracting data from the database. Instead of extracting the whole table, only information that has changed since the last full extraction is extracted" at Col. 5 lines 47-52. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Dahlberg and Jiang's teachings by adding the time stamps after a successful export and the step of searching database for changed or added data based on the time stamps as suggested by Dahlberg to Jiang's method in order to reduce the time and resource required for data extraction, because only changed and added data identified using the time stamps are exported.

As per claim 8, Jiang and Dahlberg teach the method of claim 5 as discussed above. Jiang also teaches: "wherein said program database includes a flight data table, and a number of engine data tables and aircraft data tables and said step of searching said program database comprises searching said flight data table for flight data that is new or modified since said last successful export" at Col. 4 lines 54-67 and Figs. 12a-12b.

As per claim 9, Jiang and Dahlberg teach the method of claim 8 as discussed above. Jiang also teaches: "retrieving data comprises retrieving data from said engine data tables and said flight data tables for each flight data record found in said flight data table" Col. 4 lines 54-67 and Figs. 12a-12b.

As per claim 10, Jiang and Dahlberg teach the method of claim 9 as discussed above. Dahlberg also teaches "providing each of said engine data tables and said aircraft engine tables with an indication that data retrieval is completed after said flight data is retrieved from each table" at Col. 5 lines 3-10.

As per claim 11, Jiang and Dahlberg teach the method of claim 5 as discussed above. Dahlberg also teaches: "said program database includes a process indicator table" at Col. 5 lines 3-10, and "a number of engine data tables and aircraft data tables and said step of searching said program database comprises searching said process indicator table for reprocessed flight data that is changed since said last successful export" at Col. 5 lines 47-66.

As per claim 12, Jiang and Dahlberg teach the method of claim 11 as discussed above. Jiang also teaches: "said step of retrieving data comprises retrieving data from said engine data tables and said aircraft data tables for each reprocessed flight data record found in said process indicator table" at Col. 4 lines 54-67 and Figs. 12a-12b.

As per claim 13, Jiang and Dahlberg teach the method of claim 12 as discussed above. Dahlberg further teaches: "providing each of said engine data tables and said aircraft engine tables with an indication that data retrieval is completed after said reprocessed flight data is retrieved from each table" at Col. 5 lines 3-11.

As per claim 14, Jiang and Dahlberg teach the method of claim 5 as discussed above. Dahlberg also teaches: "said program database includes an initialization data table, and said step of searching said program database comprises searching said initialization data table for initialization data that is changed since said last successful export" at Col. 5 lines 48-66.

As per claim 15, Jiang and Dahlberg teach the method of claim 14 as discussed above. Dahlberg also teaches: "wherein said step of retrieving data comprises retrieving initialization data found in said initialization data table" at Col. 9 lines 25-35.

As per claim 16, Jiang and Dahlberg teach the method of claim 15 as discussed above. Dahlberg also teaches: "providing said initialization data table with an indication that data retrieval is completed after said initialization data is retrieved from said initialization table" at Col. 5 lines 3-11.

As per claim 17, Jiang and Dahlberg teach the method of claim 5 as discussed above. Jiang further teaches: "said program database includes a compression data table" at Col. 5 lines 40-50. Dahlberg also teaches: "said searching said program database comprises searching said compression data table for compression data that is changed since said last successful export" at Col. 9 lines 25-35.

As per claim 18, Jiang and Dahlberg teach the method of claim 17 as discussed above. Dahlberg also teaches: "said step of retrieving data comprises retrieving compression data found in said compression data table" at Col. 9 lines 25-35.

As per claim 19, Jiang and Dahlberg teach the method of claim 18 as discussed above. Dahlberg further teaches: "providing said compression data table with an

indication that data retrieval is completed after said compression data is retrieved from said compression table" at Col. 5 lines 3-11.

Response to Arguments

4. Applicant's arguments filed March 3, 2006 have been fully considered but they are not persuasive. The examiner respectfully traverses applicant's arguments.

Regarding the phrase "re-alerted and backdated data", applicants argued that: "the Examiner's interpretation of the phrase is incorrect" and "the invention should be interpreted as recited within the claims and described within the specification". However, applicants then relied on the specification at page 8 for the definition of the phrase. Applicant's specification at page 8 provides: "the searches of various database tables will retrieve re-smoothed, **re-alerted, and backdated data. That is if a data record that had previously been exported** to the destination database 24 **is subsequence changed** in the program database 20, then the **extractor program 22 will update this data record** in the destination database 24", which is **consistent** with the Examiner's interpretation. Jiang teaches at Fig. 8(b)-8(d) the steps of comparing previous data with present data to identify change and update the data. Jiang therefore teaches the claimed limitation "re-alerted and backdated data."

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding independent claims 1, 5, applicants seemed to argued that Jiang and Dahlberg as combined, do not teach any limitation of the claims. The examiner respectfully submit the 103 rejection presented in section 4 of this Office Action address every limitation of the claims, as well as motivation to combined references. Applicant's arguments regarding claims 1, 5 therefore do not comply with 37 CFR 1.111(c) because they **do not clearly point out** the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Jiang teaches all limitations of the claims 1, 5, but does not teach the step of: "after a successful export, updating an external time file with the date and time of said successful export". However, Dahlberg teaches a method for incremental extracting data from a database (Col. 5 lines 47-55) utilizing time stamps to indicate the time of the last full extract at

Col. 6 lines 55-60. **Dahlbert suggest the use of the time stamps to help** "reduce the time spent extracting data from the database. Instead of extracting the whole table, only information that has changed since the last full extraction is extracted" at Col. 5 lines 47-52. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Dahlberg and Jiang's teachings by adding the time stamps after a successful export as suggested by Dahlberg to Jiang's method in order to reduce the time and resource required for the next data extraction, because only changed and added data identified using the time stamps are exported.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the only missing limitation in Jiang is the time stamp of a successful export, which is within the level of ordinary skill in database art, and could be an inherent feature of Jiang's system because most database system use timestamps for every tranaction. Dahlberg suggests the use of the time stamps to help "reduce the time spent extracting data from the database" and is relied upon by the Examiner to show this fact.

In light of the foregoing arguments, the 35 U.S.C 103 rejection is hereby sustained.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Khanh B. Pham
Examiner
Art Unit 2166

June 6, 2006

Kpham